

**StorCase® Technology**  
**Data Express®**  
**DE200i-S**

*Removable*  
*SCSI Narrow Single-Ended*  
*Drive Enclosure*

**User's Guide**

---

**StorCase® Technology**

**Data Express®**

**DE200i-S**

*Removable*

*SCSI Narrow Single-Ended  
Drive Enclosure*

**User's Guide**

**Part No. D89-0000-0038 D01     January 2003**



**StorCase Technology, Inc.**

**17600 Newhope Street**

**Fountain Valley, CA 92708-9885**

**Phone (714) 438-1850**

**Fax (714) 438-1847**

## LIMITED WARRANTY

STORCASE TECHNOLOGY, Incorporated ("StorCase") warrants that its products will be free from defects in material and workmanship, subject to the conditions and limitations set forth below. StorCase will, at its option, either repair or replace any part of its product that proves defective by reason of improper workmanship or materials. Repair parts or replacement products will be provided by StorCase on an exchange basis, and will be either new or reconditioned to be functionally equivalent to new.

This warranty does not cover any product damage that results from accident, abuse, misuse, natural or personal disaster, external power surge or failure, or any unauthorized disassembly, repair or modification. StorCase will not be responsible for any software, firmware or other customer data stored within, or interfacing with a StorCase product.

### Duration of Warranty

**Seven-Year Warranty:** The following StorCase products are covered by this warranty for a period of seven (7) years from the original date of purchase from StorCase or its authorized reseller: all Data Express® removable device enclosures and all StorCase interface cables and accessories specifically intended for use with these products. Data Silo®, Data Stacker® and InfoStation® products are covered by this warranty for a period of seven (7) years, excepting the RAID controller, power supply, fan and blower components, which are covered by the three-year warranty described below.

**Three-Year Warranty:** The following StorCase products are covered by this warranty for a period of three (3) years from the original date of purchase from StorCase or its authorized reseller: all Rhino®JR external expansion chassis and all RAID controller modules. In addition, the following components of the Data Silo®, Data Stacker®, InfoStation® products are subject to warranty for a period of three (3) years: all power supplies, fans and blowers.

### Warranty Claim Requirements

To obtain warranty service, the defective product must be returned to your local authorized StorCase dealer or distributor, or, with prior StorCase approval, to the StorCase factory service center.

For defective products returned directly to StorCase, a Return Material Authorization ("RMA") number must be obtained by calling StorCase Customer Service at (714) 445-3455. The RMA number must be prominently displayed on the outside of the return package. Shipments must be freight-prepaid and insured, and must include the product serial number, a detailed description of the problem experienced, and proof of the original retail purchase date. Products must be properly packaged to prevent damage in transit. Damage resulting from improper packaging will not be covered by this warranty. The StorCase factory service center is located at 17650 Newhope Street, Receiving Dock, Gate #4, Fountain Valley, CA 92780, U.S.A.

## Free Technical Support

StorCase provides free technical support. If you experience any difficulty during the installation or subsequent use of a StorCase product, please contact StorCase's Technical Support Department prior to servicing your system. This warranty covers only repair or replacement of defective StorCase products, as described above. StorCase is not liable for, and does not cover under warranty, any costs associated with servicing and/or installation of StorCase products.

StorCase Technical Support can be reached in the U.S. at (714) 438-1858 or toll-free at (888) 435-5460 (U.S. and Canada only). StorCase European Technical Support can be reached in the U.K. at +44 (0) 1932 738900.

## Disclaimers

The foregoing is the complete warranty for the products identified above and supersedes all other warranties and representations, whether oral or written. StorCase expressly disclaims all warranties for the identified products, which are not stated herein, including, to the extent permitted by applicable law, any implied warranty of merchantability or fitness for a particular purpose. In no event will StorCase be liable to the purchaser, or to any user of a StorCase product, for any damages, expenses, lost revenues, lost savings, lost profits, or any other incidental or consequential damages arising from the purchase, use or inability to use a StorCase product, even if StorCase has been advised of the possibility of such damages.



Copyright © 2003 StorCase Technology. All rights reserved. All registered trademarks are the property of StorCase Technology. All other logos and trademarks are properties of their respective companies.



## Declaration of Conformity

**Company Name:** StorCase Technology, Inc.

**Corporate Office Address:** 17600 Newhope Street  
Fountain Valley, CA 92708

**Manufacturing Address:** 17600 Newhope Street  
Fountain Valley, CA 92708

**Product Name:** Data Express DE200

**Model Number:** DE200i-XSXX/XXX

Conforms to the following standards:

**EMC Directives:** EN 50081-1: 1992 Generic Emission  
(89/336/EEC) - EN 55022/CISPR22 Class B  
EN 50082-1: 1992 General Immunity  
- IEC 1000-4-2 ESD  
- IEC 1000-4-3 Radiated Immunity  
- IEC 1000-4-4 Electrical Fast Transient

**Low Voltage Directive:** EN 60950  
(73/23/EEC)

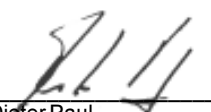
**Safety Standards:** CAN/CSA-C22.2 No. 950-93  
CSA (NRTL/C) UL 1950

**TUV** EN 60950: 1988 EN 60950/A2: 1991  
EN 60950/A1: 1990

**EMI Standards:** FCC Part 15, Class B

**EMC Standards:** AS/NZS 3548 Information Technology Equipment

**Year of Manufacture:** 1997

Signature:   
Full name: Dieter Paul  
Position: President

## Table of Contents

INTRODUCTION .....	1
Packaging Information .....	1
Serial Numbers .....	1
Package Contents .....	2
General Description .....	3
Receiving Frame Front Panel .....	4
Receiving Frame Rear Panel .....	5
INSTALLATION .....	7
Installing the Drive in the Carrier .....	7
Preparation .....	7
Installation .....	8
Installing the Receiving Frame .....	11
Selecting the Unit ID Number .....	13
SCSI Interface Connector J2 .....	14
Adjusting the Spin Down/Up Timer .....	14
APPENDICES .....	15
Appendix A- Specifications/Dimensions .....	16
Appendix B - Factory-Installed Options .....	18
Hot Swap Board .....	18
Appendix C - Attaching/Removing the ON/OFF Key .....	22
Appendix D - Optional Accessories .....	23
Carrying Case .....	23
Drive Cover .....	24
Reader's Comments .....	25

## List of Figures

Figure 1:	Package Contents .....	2
Figure 2:	DE200i-S Receiving Frame and Carrier .....	3
Figure 3:	Receiving Frame Front Panel .....	4
Figure 4:	Receiving Frame Unit ID Number and Activity Display .....	5
Figure 5:	Receiving Frame (Rear View) .....	6
Figure 6:	Drive Installation Assembly .....	8
Figure 7:	Typical SCSI ID Select Connection .....	9
Figure 8:	Receiving Frame Connector (J4) Pin Configuration .....	10
Figure 9:	Receiving Frame Mounting Holes .....	11
Figure 10:	Unit ID Select Switch Location .....	13
Figure 11:	Device Spin Down/Up Timer Switch .....	14
Figure A-1:	DE200i-S Physical Dimensions .....	15
Figure B-1:	Attaching the Hot Swap Board .....	19
Figure B-2:	Hot Swap Board Jumper Options .....	20
Figure C-1:	Reconfiguring the Key Lock Mechanism .....	22
Figure D-1:	Carrying Case .....	23
Figure D-2:	Full Drive Cover .....	24

## List of Tables

Table 1:	Receiving Frame Motherboard Connector J4 Pin Configuration .....	10
Table 2:	SCSI Interface Connector J2 Pin Assignments .....	14

**NOTICE:** This User's Guide is subject to periodic updates without notice. While reasonable efforts have been made to ensure the accuracy of this document, StorCase Technology, Inc. assumes no liability resulting from errors or omissions in this publication, or from the use of the information contained herein.

Please check the StorCase web site at <http://www.storcase.com> or contact your StorCase representative for the latest revision of this document.

## INTRODUCTION

### Packaging Information

The StorCase Technology Data Express® system is shipped in a container designed to provide protection and prevent damage during shipment. The Data Express unit was carefully inspected before and during the packing procedure at the factory. Bent or broken connectors, or evidence of other damage to the Data Express should be reported to the shipper immediately. Refer to Figure 1 for the package contents.

If the wrong Data Express model has been received, please call your reseller or StorCase at (800) 435-0642 to arrange for a Return Material Authorization (RMA). StorCase cannot accept returns which do not display an RMA number on the outside of the package. Return the unit with all the original packing materials.

Before removing any component from its packaging, discharge any static electricity by touching a properly grounded metal object.

### Serial Numbers

Both the Data Express receiving frame and carrier are labeled with serial numbers. These numbers must be reported to the StorCase Customer Service Representative in order to receive a Return Material Authorization (RMA) for warranty claims. Locate the serial number labels and record the numbers in the spaces provided below.

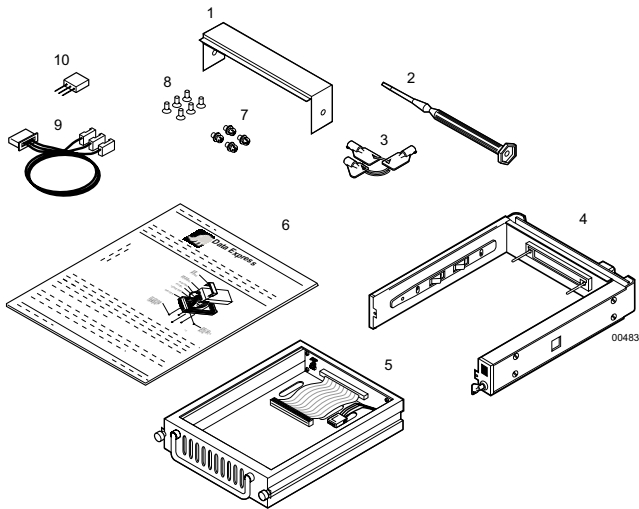
**Receiving Frame:**

**Device Carrier:**



## Package Contents

The DE200i-S package contents include the following items. If any item is missing or damaged, contact your StorCase dealer for a replacement.



- |                    |   |
|--------------------|---|
| 1. Cable Cover     | 7. #6-32 Phillips Machine Hd. Mounting Screws |
| 2. Alignment Tool  | 8. #6-32 Phillips Flat Hd. Mounting Screws    |
| 3. Drive Lock Keys | 9. 1.25mm/2mm ID Select Cable                 |
| 4. Receiving Frame | 10. Single Row Wire Wrap Connector            |
| 5. Drive Carrier   |   |
| 6. Insert Sheet    |   |

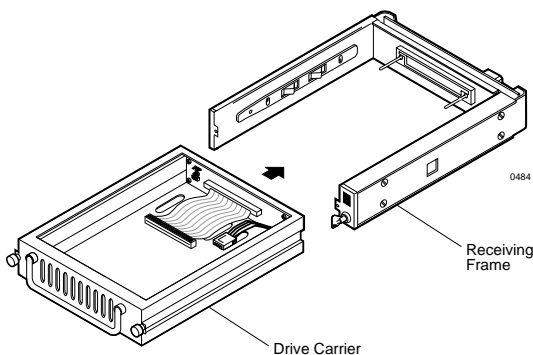
*Figure 1: Package Contents*

## General Description

The StorCase Technology **Data Express® DE200i-S** is a removable drive carrier and receiving frame designed to provide durable and reliable mounting for one (1) 3.5" SCSI drive within a 5.25" half-height peripheral slot (Figure 2).

The DE200i-S allows a drive to be removed and transported to another DE200i-S-equipped computer or expansion chassis, and also provides the ability to secure sensitive data by removing and storing the drive safely for future use.

The DE200i-S (Figure 2) was specifically designed for use in high shock and vibration environments (e.g. aircraft) which may also have non-PVC material requirements. The DE200i-S is equipped with manual lock down thumbscrews to secure the drive carrier within its receiving frame, and a drive lock/power switch with a fixed key which can be reconfigured by the user to be removable, if desired. The DE200i-S uses teflon ID select and power cables, and halogen-free I/O cables.



*Figure 2: DE200i-S Receiving Frame and Carrier*

This User's Guide describes the steps required to install the StorCase Data Express DE200i-S removable enclosure inside a computer peripheral bay or external expansion chassis. This guide supplements documentation provided with the host computer system, operating system, and the drive to be installed within the Data Express carrier.

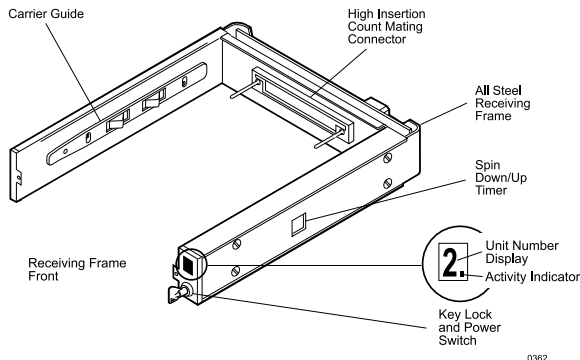
## Receiving Frame Front Panel

(Figure 3)

- **Key Lock/Drive Power Switch:** Performs three functions. The key lock assures proper seating of the device carrier within the receiving frame, turns power to the device carrier on and off, and prevents unauthorized removal or installation of the carrier (when configured with a removable key). For the computer to access data on the DE200i-S disk drive, the key must be turned counterclockwise to the locked position.

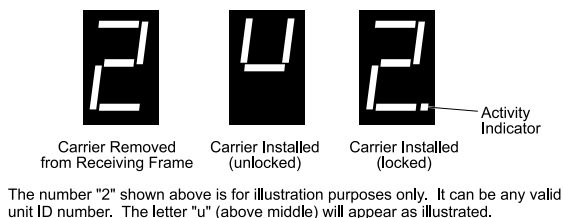
The key lock/power switch can be configured with either a fixed (factory configuration) or removable key as shown in Appendix C.

- **Unit ID Number Indicator** (Figure 4): Displays the physical address of the DE200i-S device carrier if the carrier is *Installed and Locked* in the receiving frame or if the carrier is *Removed* from the receiving frame. If the carrier is *Installed but Not Locked* in the receiving frame, a "u" will be displayed to indicate an unlocked condition. The unit ID number is selected by means of the ID select switch inside the receiving frame using a special alignment tool supplied with the DE200i-S.
- **Activity Indicator:** A small dot next to the Unit ID Number which illuminates to show when the host computer is accessing the data on the DE200i-S carrier. This dot will flash during communication with the host computer.
- **Device Spin Down/Up Timer:** May be disabled by removing Jumper J6 P1-P2 (Figure 5). The timer controls the length of time that the unit ID number display flashes during device spin down/up, providing a visual indication of drive activity. Refer to Figure 11 for switch settings.



0362

Figure 3: Receiving Frame Front Panel



0064

*Figure 4: Receiving Frame Unit ID Number and Activity Display*

## Receiving Frame Rear Panel

(Figure 5)

- **DC Power Connector (J1):** The Data Express uses a standard 4-pin DC Power Connector to accept DC power.
- **I/O Connector (J2):** The input/output connector provides a standard interface for all SCSI signals. See Table 2 for J2 pin assignments.
- **ID Select Pins (J4):** Pins 1-14 are reserved. Pins 15-20 of this connector provide unit SCSI ID selection for the computer system or expansion chassis. For remote ID selection through an expansion chassis, the unit ID must be set to "0" or open (no jumpers installed) on these pins. See Table 1 for J4 pin assignments.
- **Enable Termination Power To/From SCSI Bus (W1):** The rear panel contains the bus terminators (active) for 8-bit single-ended SCSI interface. Jumper is installed at the factory.
- **Onboard (Receiving Frame) Termination (W2):** Position "A" is installed at the factory and will disable termination. Moving the jumper to position "B" will enable onboard termination.

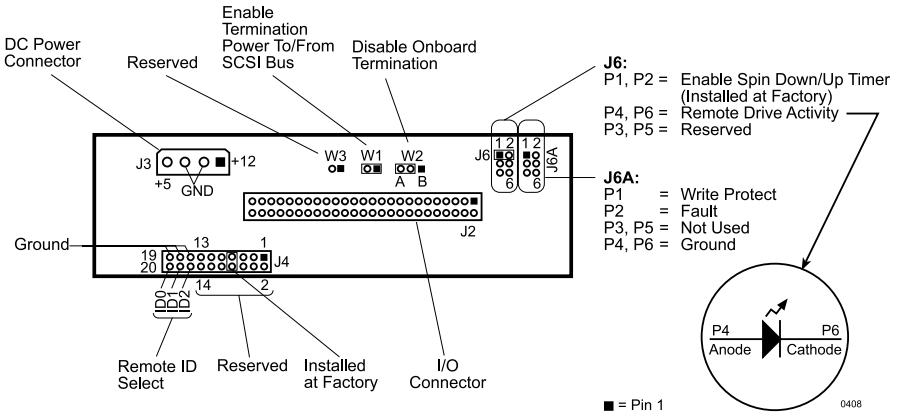


Figure 5: Receiving Frame (Rear View)

## INSTALLATION

### Installing the Drive into the Carrier

#### Preparation

While performing the steps in this section, work on a soft surface to prevent excessive shock to the drive being installed. Also refer to the manufacturer's documentation provided with the drive.

**NOTE:** A #2 Phillips screwdriver will be required during this procedure.

1. Remove the drive from its protective packaging.
2. **Plastic Drive Bezel:** If the drive came equipped with a plastic front bezel, it must be removed.
3. **SCSI Drive Termination:** Disable or remove the termination resistor packs from the drive. Termination is handled by an external terminator in the DE100i-S receiving frame. Refer to the documentation provided by the drive manufacturer for the location of these terminators or jumpers.
4. **SCSI Drive ID Select Jumpers:** Locate the SCSI ID Select Jumper positions on the disk drive, and remove any jumper plugs in this area. The SCSI ID cable will be installed into this section of the drive.
5. **SCSI ID Cable:** The DE200i-S carrier is supplied with one (1) 4-wire cable. This cable is used for remote ID selection via jumpers located on the rear of the receiving frame.

The cable consists of **black**, **brown**, **red**, and **yellow** wires. The **black** wire is plugged into the pin used to select ID0, the **brown** wire plugs into the pin for ID1, and the **red** wire plugs into the pin for ID2. The **yellow** wire plugs into the pin for Drive Activity Signal.

Disk drives use a row of pins to provide ground to the ID signals. This row of pins is not used when installing the ID select cable to the carrier connector. Refer to the drive manufacturer's documentation for more information.

## Installation

1. Attach the I/O cable from the rear distribution board of the DE200i-S carrier to the disk drive (Figure 6).
2. Attach the 4-pin DC power cable from the rear distribution board to the disk drive (Figure 6).
3. Install the 4-pin ID select cable into the rear signal distribution board connector and connect to the appropriate drive pins as shown in Figure 7.
4. Carefully insert the drive into the carrier at an angle, cable-end first. **Make sure none of the cables are pinched.** Lower the front of the drive carefully into place. Fasten the drive into the carrier with four (4) of the eight (8) screws provided as shown in Figure 6.
5. Attach the provided cable cover with two (2) #6-32 Phillips Flat Hd. screws as shown in Figure 6.

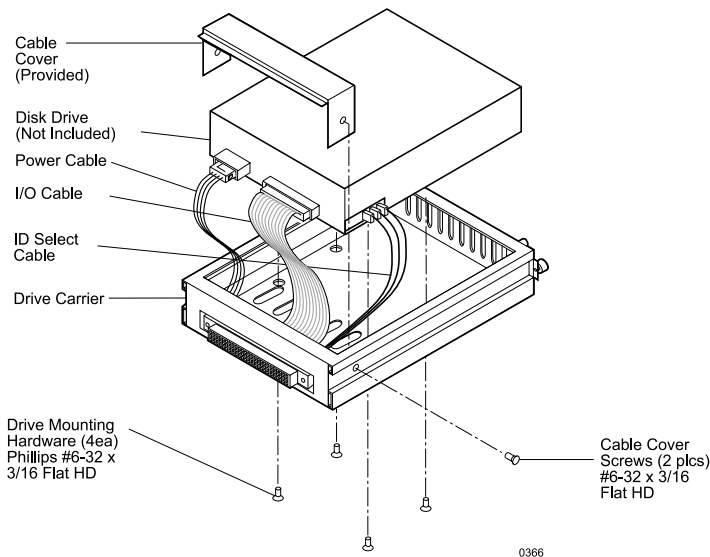


Figure 6: Drive Installation Assembly

## SCSI ID Select Cable Connection

- Black -** Connects to ID0 pin on drive
- Brown -** Connects to ID1 pin on drive
- Red -** Connects to ID2 pin on drive
- Yellow -** Connects to Drive Activity Signal pin on drive

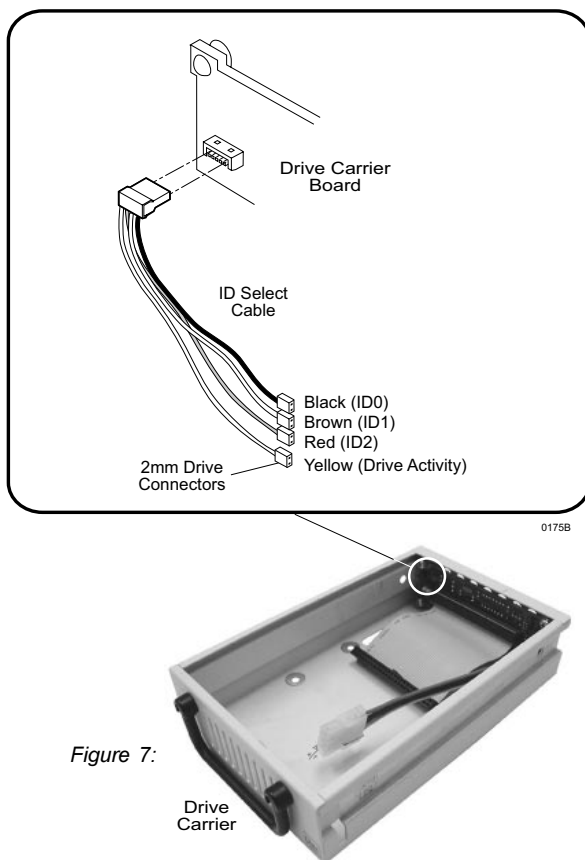


Figure 7: Typical SCSI ID Select Connection



## Installing the Receiving Frame

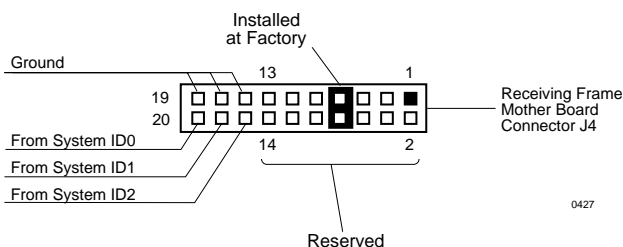
The drive should be installed into the carrier before installing the receiving frame into the mounting bay of a computer or expansion chassis.

**NOTE:** Use a #2 Phillips screwdriver during this procedure.

1. Turn OFF power to the computer.
2. Open the computer system according to the manufacturer's instructions. If necessary, temporarily remove any expansion boards that may make installation difficult.
3. To select the DE200i-S unit ID remotely through the computer system or external expansion chassis, the appropriate cable from the system must be connected to the ID select connector (J4) on the rear of the receiving frame as shown in Table 1 and Figure 8.

**Table 1: Receiving Frame Motherboard Connector J4 Pin Configuration**

Pin 1	RESERVED	Pin 11	RESERVED
Pin 2	RESERVED	Pin 12	RESERVED
Pin 3	RESERVED	Pin 13	RESERVED
Pin 4	RESERVED	Pin 14	RESERVED
Pin 5	RESERVED	Pin 15	Ground
Pin 6	RESERVED	Pin 16	ID2
Pin 7	RESERVED	Pin 17	Ground
Pin 8	RESERVED	Pin 18	ID1
Pin 9	RESERVED	Pin 19	Ground
Pin 10	RESERVED	Pin 20	ID0



*Figure 8: Receiving Frame Connector (J4) Pin Configuration*

**IMPORTANT NOTE:** In order to use remote ID selection from a computer or expansion chassis, the Unit ID number on the DE200i-S receiving frame must be set to "0" with the provided alignment tool. Refer to the section "Selecting the Unit ID Number" later in this User's Guide for the Unit ID selection procedure.

4. With the drive carrier locked in place inside the receiving frame, install the DE200i-S into the 5.25" drive opening in the computer or expansion chassis. Use the appropriate guides to position the DE200i-S, and fasten it into place with the four (4) #6-32 Phillips Pan Hd. screws provided. Figure 9 illustrates the location of the mounting holes. Mounting holes are provided on each side and the bottom of the receiving frame to accommodate a variety of mounting configurations. Use the mounting holes which best suit the computer or expansion chassis configuration.

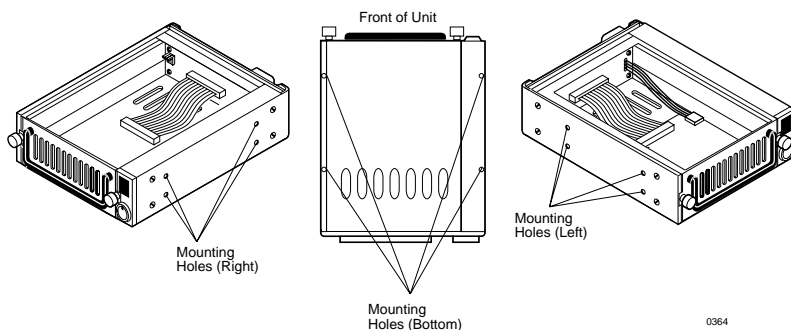


Figure 9: Receiving Frame Mounting Holes

5. Adjust the front of the receiving frame so the carrier slides freely in and out on the receiving frame guides. The position of adjoining peripheral units may require adjustment.
6. To connect the drive to a Remote Activity LED in the computer system or expansion chassis, connect the appropriate cable(s) to the receiving frame motherboard as shown in Figure 5. Connect J6 Pins 4 & 6 to a remote activity LED.
7. Connect the I/O cable from the host adapter to the receiving frame. The Pin 1 indicator on the cable must be properly aligned. Refer to Figure 5 for the correct Pin 1 location.

Make sure that only the last SCSI device is terminated. If the DE200i-S is at the end of a daisy chain, the terminators on the receiving frame **must** be enabled. If the DE200i-S is in the middle of a daisy chain, termination should be disabled (factory default). Refer to jumper W2 in Figure 5.

8. Connect the power cable from the DC power supply in the computer or expansion chassis to the power connector on the DE200i-S receiving frame. Refer to Figure 5 for the receiving frame power connector location.
9. Replace any expansion boards that may have been removed earlier. Replace the system cover according to the manufacturer's instructions.
10. Reconnect any system or peripheral cables removed earlier.
11. Turn ON power to the computer. If the installation has been successful, and all cables have been properly attached, the system should boot normally. Although the computer may not recognize the DE200i-S yet, the appropriate front panel LED indicators on the Data Express should illuminate.  
  
**NOTE:** The lock on the DE200i-S receiving frame functions as a lock and a DC power switch for the carrier unit. The lock must be engaged (turned counterclockwise) in order to supply power to the carrier and installed drive unit.
12. The new drive may need to be formatted or initialized prior to use with the operating system and applications software. Refer to the drive and/or computer manufacturer's documentation for formatting information.

## Selecting the Unit ID Number

1. Verify that power is turned ON to the DE200i-S receiving frame by turning on the computer or external expansion chassis. A number should appear in the unit ID display window if the carrier is locked in place.
2. Unlock the DE200i-S carrier on the receiving frame. Unless the spin down/up timer has been disabled, the unit ID number will begin flashing, indicating that the drive is spinning down. **DO NOT REMOVE THE CARRIER FROM THE RECEIVING FRAME WHILE THE UNIT ID NUMBER IS FLASHING.** The length of time that the unit ID number flashes is controlled by a small timing switch located on the side of the receiving frame. Refer to Figure 11 for information on adjusting the timer.  
  
**WARNING:** Unlocking the carrier unit switches DC power off to the drive. Since disk drives require a short amount of time to spin down, allow about 15 seconds before pulling the carrier unit out of the receiving frame to avoid possible damage to the drive.
3. A "u" will be displayed once the drive has completed spin down and is ready to be removed from the receiving frame. The indicator will return to the SCSI ID number when the carrier is removed from the receiving frame.

4. Use the alignment tool supplied with the DE200i-S to select the unit ID number of the disk drive. Refer to Figure 10 for the location of the Unit ID Select Switch inside the receiving frame.
5. After selecting an appropriate unit ID number, replace the DE200i-S carrier in the receiving frame, and **LOCK IT IN PLACE**.

**NOTE:** The lock on the DE200i-S receiving frame functions as a lock and a DC power switch for the carrier unit. The lock must be engaged (turned counterclockwise) in order to supply power to the carrier and installed drive unit.

6. The new drive may need to be formatted or initialized prior to use with the operating system and applications software. Refer to the drive and/or computer manufacturer's documentation for formatting information.

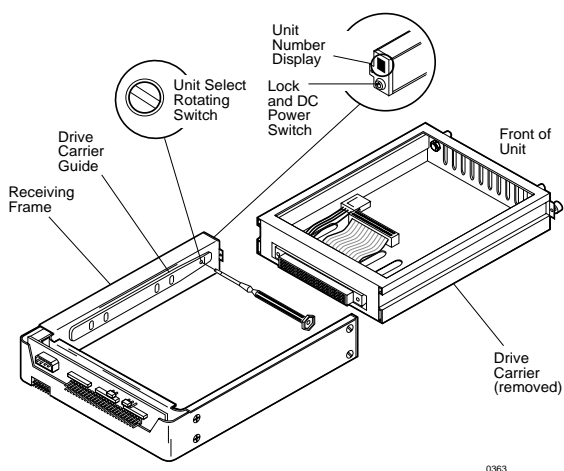


Figure 10: Unit ID Select Switch Location

## SCSI Interface Connector J2

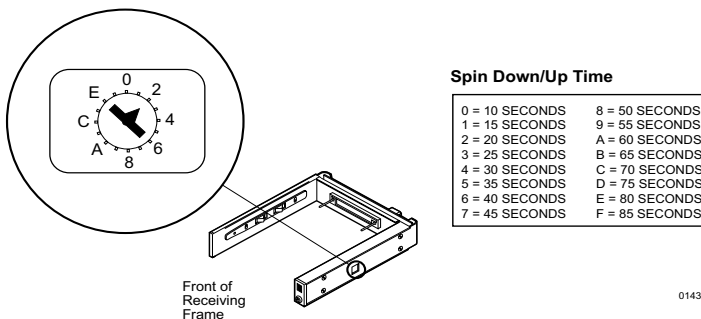
The SCSI interface connector (J2) pin assignments are supplied for your convenience. All odd numbered pins, except Pins 25 & 29 must be connected to ground. Pin 25 should be left open. Pin 29 can be used for Synchronized Spindle operation. Pin 26 is reserved for terminator resistor power source.

**Table 2: SCSI Interface Connector J2 Pin Assignments**

Pin	Signal	Pin	Signal	Pin	Signal	Pin	Signal
2	-Data Bit 0	16	-Data Bit 7	28	-Ground	40	-RST
4	-Data Bit 1	18	-Data Bit P	30	-Ground	42	-MSG
6	-Data Bit 2	20	Ground	32	-ATN	44	-SEL
8	-Data Bit 3	22	Ground	34	Ground	46	-C/D
10	-Data Bit 4	24	Ground	36	BSY	48	-REQ
12	-Data Bit 5	26	TRMPWR	38	ACK	50	-I/O
14	-Data Bit 6						

## Adjusting the Spin Down/Up Timer

**NOTE:** The timer for device spin down is controlled by a small selector, located in a cutout on the side of the DE200 receiving frame as shown in Figure 11. The amount of time required for a drive to spin down is approximately 15 seconds or more. This number can vary depending on the type of SCSI device and manufacturer (some drives may require 45 seconds or more). The factory configuration is set for 20 seconds. A different delay time may be selected with the provided alignment tool. Refer to the SCSI device manufacturer's manual for more information on required device spin down time.



*Figure 11: Device Spin Down/Up Timer Switch*

## **APPENDICES**

## Appendix A - Specifications/Dimensions

SCSI Data Express subsystems conform to the Small Computer Systems Interface (SCSI) Standard set by the American National Standards Institute (ANSI).

Environmental Specifications		
	Operating	Storage
Ambient Temperature	0° C to 40° C	-40° C to 70° C
Relative Humidity <sup>(1)</sup>	10% to 80%	10% to 90%
Altitude	-1000 to 10,000 ft -305m to 3048m	-1000 to 40,000 ft -305m to 12195m
Shock <sup>(2)</sup>	10g	60g

<sup>(1)</sup>Non-condensing with maximum gradient of 10% per hour.

<sup>(2)</sup>11 msec pulse width 1/2 sine wave.

Physical Specifications	Carrier	Receiving Frame
Height	1.68" (42.7mm)	1.70" (43.2mm)
Width	5.14" (130.6mm)	5.75" (146.1mm)
Depth	7.38" (187.5mm)	8.18" (207.8mm)
Weight	1.2lb. (0.55kg)	1.3lb (0.59kg) <sup>(1)</sup>

<sup>(1)</sup>Plus weight of installed disk drive.

<sup>(2)</sup>With carrier removed.

Chassis Reliability/Maintainability	
MTBF	500,000 Hours
MTTR	5 Minutes
Preventive Maintenance	None

Electrical Specifications	
Input	+5V 65mA
	+12V 400μA

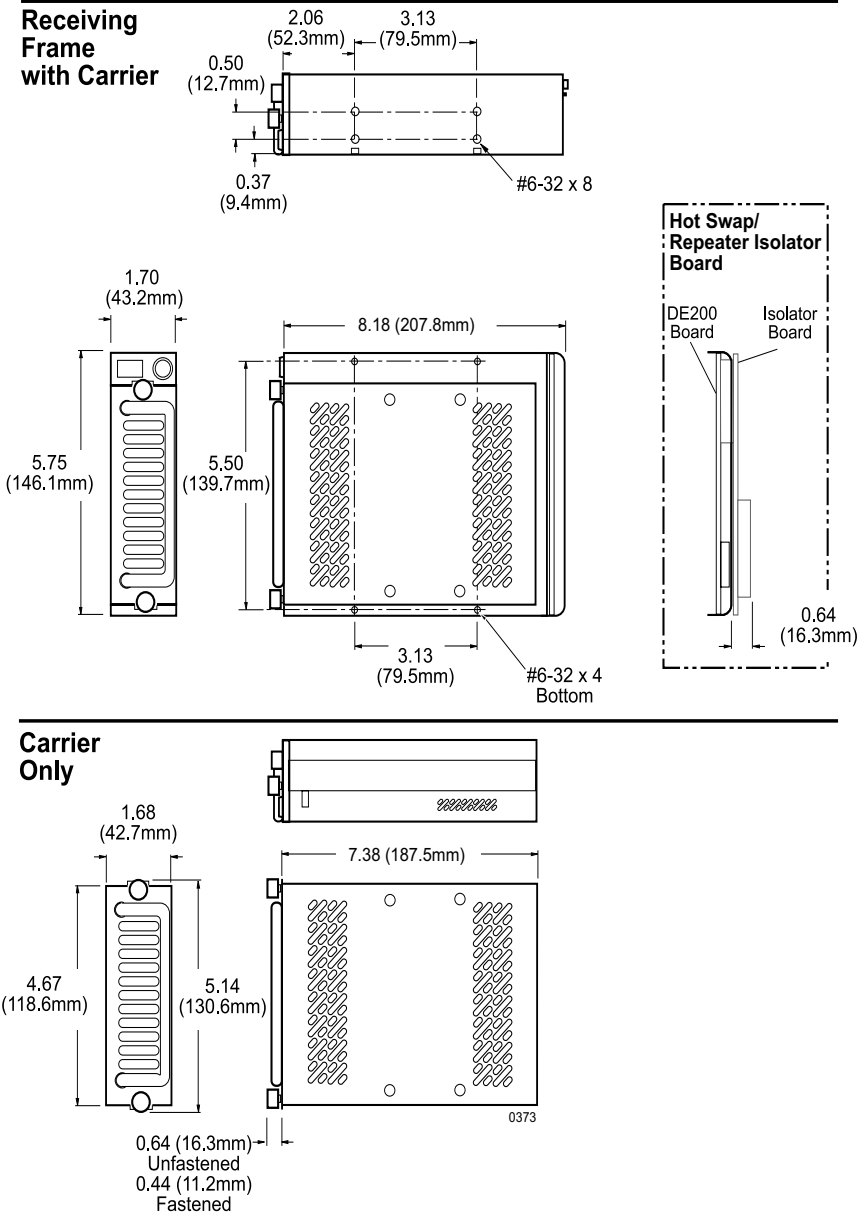


Figure A-1: DE200i-S Physical Dimensions  
(Dimensions are for reference only)



## Appendix B - Factory-Installed Options

### Hot Swap Board

The SCSI Hot Swap Board allows the installation, removal or exchange of DE200i-S carriers while your computer system is operating by monitoring and protecting the computer system and other peripheral devices on the SCSI Bus. The Hot Swap option eliminates the need to shut down your system when adding or removing a SCSI device by performing two functions:

1. Delays power up/down of the drive until the time period between SCSI bus cycles. This prevents the interruption of any SCSI bus activity being done by other devices on the bus.
2. Prevents drive power sequencing from generating noise on the SCSI bus, thus preventing data transfer corruption on other devices.

Please note that, whereas UNIX and Apple based systems provide mount/dismount drive commands, most PC systems do not provide such a feature. When using one of these operating systems, it may be necessary to reboot the computer after adding or changing a drive. This reboot activity will force the SCSI host adapter to rescan its SCSI bus for physically attached drives, and will then be able to access the new or changed drive.

### Attaching the Hot Swap Board

If the Hot Swap Board is not already attached to the DE200 receiving frame, follow the steps below for installation instructions. Otherwise, proceed to the "Using the Hot Swap Board" section for usage instructions.

**IMPORTANT NOTE:** The device carrier should be locked into the receiving frame prior to the following procedures to maintain proper connector alignment between the receiving frame and the device carriers.

1. Remove the two (2) Phillips head machine screws from the receiving frame motherboard and set the screws aside (Figure B-1).
2. Remove jumpers on the receiving frame motherboard locations J4 - Pins 7 & 8, and J6 - Pins 1 & 2 (Figure 5). Verify that W2 is set to position "A" (default setting) to disable onboard termination from the receiving frame motherboard.
3. Attach the two (2) provided stand-offs into the receiving frame motherboard holes in place of the two removed screws. Carefully align the connectors of the Hot Swap Board with the connectors on the receiving frame motherboard and gently push the Hot Swap Board into position. Make certain that all connectors are properly mated.
4. Attach the Hot Swap Board to the receiving frame motherboard by using the two screws removed earlier and insert them through the Hot Swap Board into the stand-offs.

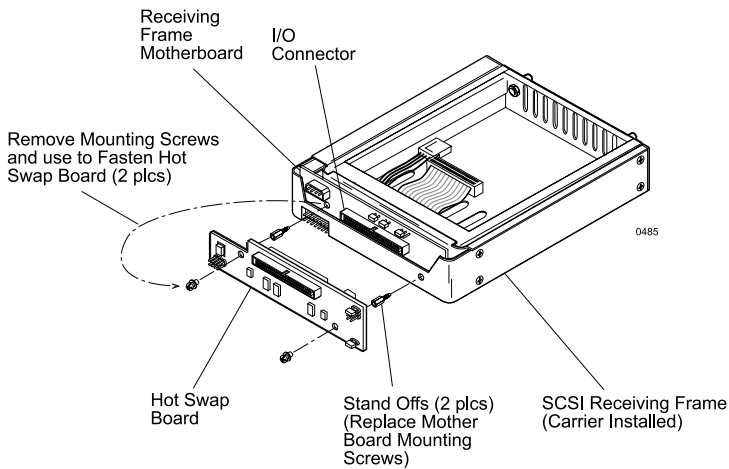


Figure B-1: Attaching the Hot Swap Board

## Jumper Options

The jumper pins on the Hot Swap Board are similar to those on the SCSI Data Express motherboard. Installing a jumper at location JP1 will disable onboard receiving frame termination (Figure B-2). Location J4 provides remote ID selection. And, J6 Pin C provides a signal to drive remote activity LED logic.

## Using the Hot Swap Board

### Carrier Removal

Follow the procedures below to remove the DE200i-S carrier from the receiving frame equipped with the Hot Swap option.

1. Verify that the drive is not active. If the system is on a network, make certain other users are not accessing the target drive, then disable it from the network. Dismount the drive.
2. Turn the DE200 key lock mechanism (located on the front of the receiving frame), clockwise to the OFF position. This unlocks the drive from the receiving frame and activates the Hot Swap Board. The unit number on the display will begin flashing.

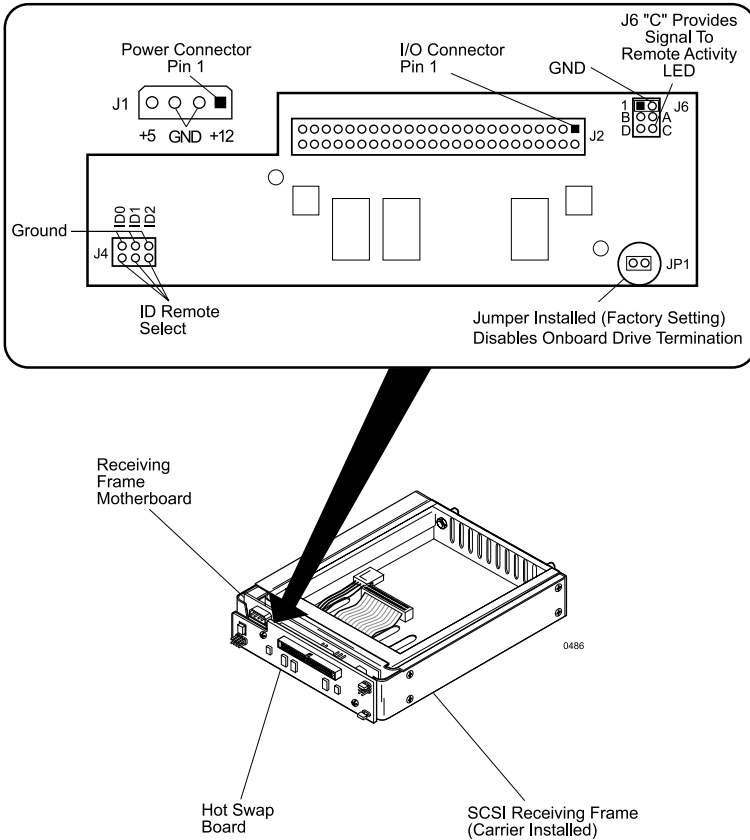


Figure B-2: Hot Swap Board Jumper Options

**WARNING:** Be careful not to remove or disturb the carrier unit at this point. Although the carrier is physically unlocked, the drive requires a minimum of 15 seconds to spin down and is subject to vibration and possible damage during this period.

3. As the unit ID number flashes, the Hot Swap Board monitors the activity of the SCSI bus. When activity is no longer present, the Hot Swap Board will remove power from the drive and then remove the device from the SCSI Bus. The unit ID number will continue to flash during this period.
4. After a short length of time the unit display will turn from a flashing unit ID number to a steady "u", indicating that the device is powered down, unlocked and ready to be removed from the receiving frame.

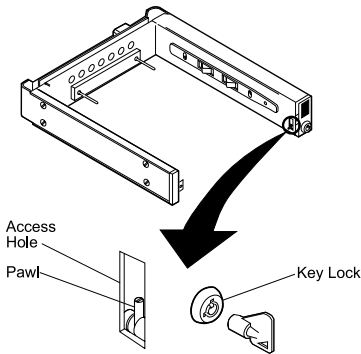
## Carrier Installation

Follow the procedures below to install the DE200i-S Carrier into the receiving frame equipped with the Hot Swap option.

1. Install the carrier into the Receiving Frame. A "u" will be present on the front panel, indicating that the carrier is in an unlocked condition.
2. Turn the key lock mechanism, located on the front of the receiving frame, counter clockwise to the ON position. This locks the drive into the receiving frame and activates the Hot Swap Board. The drive will begin to spin up and the unit number on the display will begin flashing.
3. After a short length of time the unit display will stop flashing, indicating that the device is ready to be used.

## Appendix C - Attaching/Removing the ON/OFF Key

The DE200 comes from the factory with a power/lock key which is attached to the locking mechanism. This key can be reconfigured by the user to be removable. To reconfigure, follow the steps below.



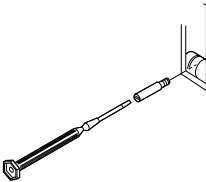
1. Make certain power is OFF to the receiving frame.

Locate the rectangular shaped key lock mechanism access hole on the inside of the receiving frame. Note that the pawl is in an upright position.

Insert the key into the lock (skip this step if the key is already fixed to the lock).



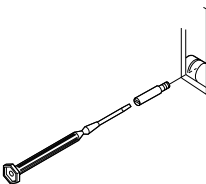
2. Rotate the key 90 degrees counterclockwise so that the pawl is visible in the access hole as shown in the figure at left.



3. Using the provided alignment tool, unscrew and remove the pawl from the access hole.



4. Rotate the key 180 degrees clockwise.



5. Reinstall the pawl into the access hole with the alignment tool.

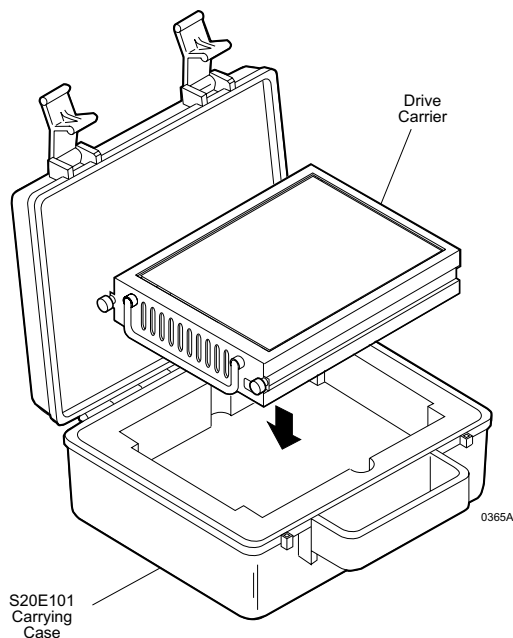
The key lock has now been reconfigured.

0371

Figure C-1: Reconfiguring the Key Lock Mechanism

## Appendix D - Optional Accessories

### Carrying Case



*Figure D-1: Carrying Case*

The optional molded plastic carrying case is designed to transport the DE200i-S carrier from one site to another in a safe, impact and moisture resistant environment. Its compact dimensions, 7" long x 9" wide x 3.5" high, make it easy to carry and to store. The foam lining is contoured to fit a single Data Express carrier. Contact your StorCase dealer for further details and ordering information.

## Drive Cover

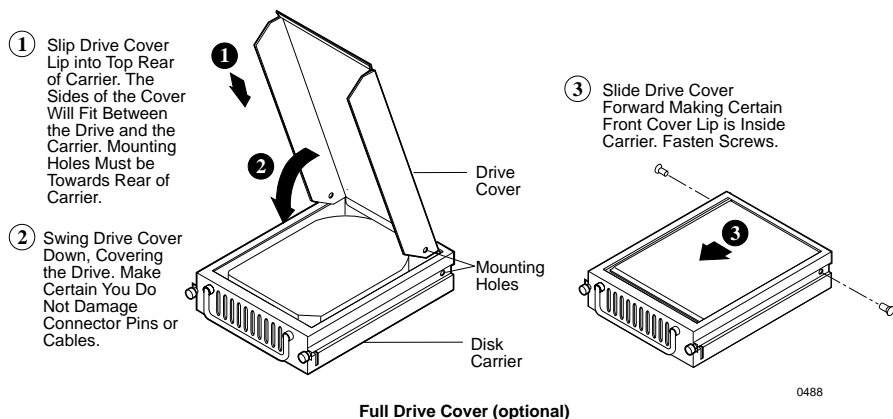


Figure D-2: Full Drive Cover

The full drive cover (DX100-COV) is an attractive metal cover which can provide additional protection to the drive, preventing foreign material from coming in contact with the drive and cables. The full drive cover is similar to the cable cover provided with the DE200i-S except the optional drive cover protects the drive as well as the cables. It is easily installed with two (2) #6-32 Phillips Flat Hd. screws as shown in the illustration above.

**NOTE:** The full drive cover may not be compatible with all 3.5" half-height drives. Exact drive height and fit within the DE200i-S frame can vary between drive manufacturers.

## Reader's Comments

Please take a few moments when your computer system is up and running to send us your ideas and suggestions for improving our products and documentation. Did the installation go smoothly for you? Are there any changes you would like us to make, either with the hardware itself, or with the installation instructions? Everyone at StorCase Technology is working toward the goal of providing you with the highest quality, most cost effective, products available on the market, and we need your comments to guide our efforts. We look forward to hearing from you soon!

Date: \_\_\_\_\_

---

---

---

---

---

---

---

---

---

---

---

---

Your Name: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Telephone: (            ) \_\_\_\_\_

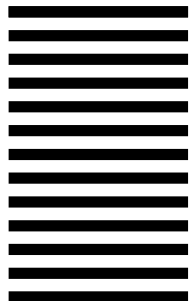
To mail this page, carefully remove it from the manual, fold it, staple or tape it shut, and drop it in the mail. To FAX this page, carefully remove it from the manual (or make a photocopy) and FAX it to us at (714) 438-1847. Thank you for taking the time to help us make our products better!



FOLD ALONG THIS LINE AND STAPLE SHUT



NO POSTAGE  
NECESSARY  
IF MAILED  
IN THE  
UNITED STATES



**BUSINESS REPLY MAIL**

FIRST CLASS MAIL PERMIT NO. 10686 SANTA ANA, CA

POSTAGE WILL BE PAID BY ADDRESSEE



17600 NEWHOPE STREET  
FOUNTAIN VALLEY CA 92708-9885

